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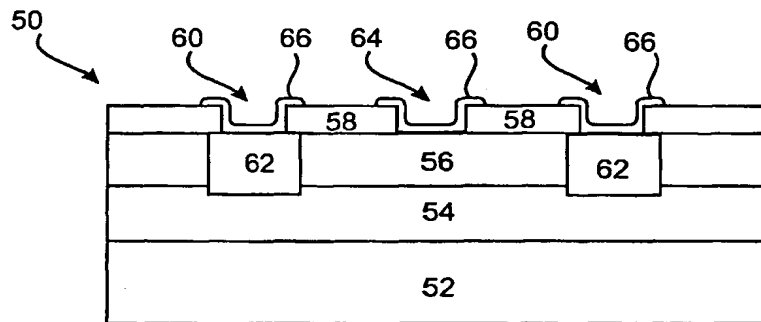
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(54) Title: AUTOMATICALLY PASSIVATED N-P JUNCTION AND A METHOD FOR MAKING IT



(57) Abstract: A method for forming an automatically passivated n-p junction (62, 56) comprises the steps of providing a p-type body (56) containing Group II and Group VI elements, one of which is mercury; forming a passivation layer (58) having at least one window (60) provided therein on a surface of the p-type body (56); subjecting the p-type body (56) to a reactive ion etching process using the passivant layer (58) as a mask to form the n-p junction (62); and forming ohmic contacts (66) to the n-type (62) and p-type regions (56). A semiconductor material, comprising an n-p junction (62, 56), includes a substrate (52); a layer of p-type material (56); a region of converted n-type material (62) formed on a localised portion defining an n-p junction (62, 56); a passivation layer (58) including windows (64) for disposing ohmic contacts (66) without exposing the n-p junction (62, 56).

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